

**To:** Ruhl, Christopher[Ruhl.Christopher@epa.gov]; Calanog, Steve[Calanog.Steve@epa.gov]  
**From:** Hestmark, Martin  
**Sent:** Fri 8/14/2015 2:12:17 PM  
**Subject:** Fw: Stabilization of Gold King Portal is Imperative!

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**From:** Williams, Laura  
**Sent:** Thursday, August 13, 2015 12:31 PM  
**To:** Hestmark, Martin  
**Subject:** Fwd: Stabilization of Gold King Portal is Imperative!

Here is the risk evaluation for the GKM. I'll get you an answer on the photos in 30 minutes.

Sent from my iPhone

Begin forwarded message:

**From:** "Stover - DNR, Bruce" <[bruce.stover@state.co.us](mailto:bruce.stover@state.co.us)>  
**Date:** August 13, 2015 at 12:03:44 PM MDT  
**To:** Steve Way <[Way.Steven@epamail.epa.gov](mailto:Way.Steven@epamail.epa.gov)>  
**Cc:** Allen Sorenson <[allen.sorenson@state.co.us](mailto:allen.sorenson@state.co.us)>, <[williams.Laura@epamail.epa.gov](mailto:williams.Laura@epamail.epa.gov)>  
**Subject:** Stabilization of Gold King Portal is Imperative!

Steve,

I'm hearing from my folks that EPA may be stopping work at Gold King indefinitely and leaving it without stabilizing and establishing temporary drainage out of the 7 Level portal....that would be a huge mistake!!!

The worst thing we could do is leave without stabilizing the situation at this portal. In my 35 years of experience with mining and underground construction projects, it is my opinion this portal is over-arched, way larger than when mined, and will imminently cave to surface relatively soon.

I inspected the portal late in the afternoon on Aug 5th. There is a large cave High-back/ pocket in the roof just beyond the brow, and the rock is loose and highly jointed. Without some kind of portal stabilization, there is a high degree of probability for a fall of ground or caving at or behind the portal face that will immediately create a new water impoundment. If this portal is left as is it will surely cave this winter or next spring, if not even sooner.

It is imperative at a minimum to at least install some large steel or CMP culverts into the portal, pushing them as far back as possible to allow for free-flow should the portal collapse on top of them. Once these contingency bypass pipes are set into the portal and bedded on top, a larger diameter culvert should also be pushed in under the brow as far through the cave area as possible, with foam-injection tubes attached to the top of the culvert. Then pump in expanding foam through the tubes attached to the top of the large culvert. Even if the foam doesn't completely fill the large cave above, it will at least armor and protect/cushion a large fall of ground onto the top of the culvert, helping keep the portal open so it can free flow.

If I can assist in any way with helping identify products, suppliers, contractors who can do this imperative emergency stabilization work, please let me know.

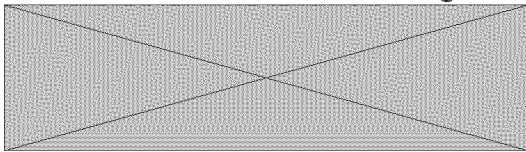
Who can I call at EPA to make sure this portal is not left in an un-stabilized, un-protected dangerous condition?

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**Bruce K. Stover**

**Director**

Inactive Mine Reclamation Program



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